

THAT WHICH IS CLAIMED:

1. A method of forming a coated boxboard product, comprising:
precalendering a boxboard product with a surface conditioning device comprising
a heatable counter-roll disposed adjacent to a tubular flexible jacket
extending around a fixed support element and having a load element
5 disposed therebetween for biasing the flexible jacket against the counter-
roll, the flexible jacket having opposed ends and being mounted to at least
one end wall at each end, the flexible jacket and the at least one end wall
at each end being rotatably driven by a drive mechanism operably
engaged therewith, the boxboard product being directed between the
10 flexible jacket and the counter-roll so as to be precalendered thereby, the
boxboard product having a top side, a back side, and being formed without
being processed by a Yankee dryer, the boxboard product further
comprising a plurality of fiber plies, including outermost plies forming the
top and back sides and comprised of bleached chemical pulp, and medial
15 plies disposed between the outermost plies and comprised of at least one
of groundwood, pressure groundwood, chemithermo-mechanical pulp,
recycled pulp, and broke; and
coating the boxboard product following precalendering thereof such that the
coated boxboard product has a density of between about 500 kg/m^3 and
20 about 1000 kg/m^3 , and a basis weight of between about 150 g/m^2 and
about 400 g/m^2 , and the top side of the coated boxboard product has a
PPS-s10 roughness of between about $0.5 \mu\text{m}$ and about $2.0 \mu\text{m}$ and a
Hunter gloss of between about 35% and about 80%.

25 2. A method according to Claim 1, wherein coating the boxboard product
further comprises coating the top side at least once.

3. A method according to Claim 1, wherein coating the boxboard product
further comprises coating the boxboard product without coating the back side thereof.

4. A method according to Claim 1, wherein coating the boxboard product further comprises coating the back side at least once.

5. A method according to Claim 1, wherein coating the boxboard product further comprises coating the boxboard product in a coating process such that the coated boxboard product has a basis weight of between about 180 g/m² and about 350 g/m².

6. A method according to Claim 1, wherein coating the boxboard product further comprises coating the boxboard product in a coating process such that the coated boxboard product has a basis weight of between about 180 g/m² and about 300 g/m².

7. A method according to Claim 1, wherein coating the boxboard product further comprises coating the boxboard product such that the top side thereof has a Bendtsen roughness of between about 0 ml/min and about 50 ml/min.

8. A method according to Claim 1, wherein coating the boxboard product further comprises coating the boxboard product such that the top side thereof has a Bendtsen roughness of between about 0 ml/min and about 20 ml/min.

9. A method according to Claim 1, wherein coating the boxboard product further comprises coating the boxboard product such that the top side thereof has a PPS-s10 roughness of between about 0.8 μm and about 1.5 μm.

10. A method according to Claim 1, wherein coating the boxboard product further comprises coating the boxboard product such that the top side thereof has a Hunter gloss of between about 40% and about 65%.

11. A method according to Claim 1, wherein coating the boxboard product further comprises coating the boxboard product such that the coated boxboard product has a density of between about 750 kg/m³ and about 1000 kg/m³.

12. A method according to Claim 1 further comprising calendering the boxboard product with a calender following precalendering of the boxboard product, the calender being selected from the group consisting of at least one nip and a soft calender.

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13. A method according to Claim 1, wherein precalendering the boxboard product further comprises moistening at least one of the top side and the back side of the boxboard product.

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14. A method according to Claim 1, wherein precalendering the boxboard product further comprises precalendering the boxboard product without moistening either side thereof.